

This question paper contains 3 printed pages]

ND—06—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Second Year) (Fourth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper-BCS-404(B)

(Essentials of Computer Security)

(Thursday, 30-11-2023)

Time : 2.00 p.m. to 5.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) All questions carry equal marks.

(ii) Figures to the right indicate full marks.

1. Attempt any *five* of the following :

15

- (a) Explain database management system.
- (b) What do you mean by public key encryption structure.
- (c) Explain the characteristics of good password.
- (d) What is database security ?
- (e) What do you mean by attack on system ?
- (f) Explain concept of encryption and decryption.
- (g) Explain the concept of subject in access control principles.

P.T.O.

2. Attempt any *three* of the following : 15

- (a) Explain in detail concept of cryptography.
- (b) List *three* approaches to message authentication.
- (c) Explain authentication architecture model in detail.
- (d) Discuss offline dictionary attack in detail.
- (e) Explain Unix password scheme in detail.

3. Attempt any *three* of the following : 15

- (a) Explain relational data model with example.
- (b) Explain skill levels of intruders.
- (c) Explain concept of confidentiality in detail.
- (d) Discuss security policy in detail.
- (e) Explain concept of masquerade.

4. Attempt any *three* of the following : 15

- (a) What are the *two* general approaches for attacking symmetric encryption scheme ?
- (b) What are the different practical security issues ?
- (c) Distinguish among subjects, objects and access rights.
- (d) Explain the concept of data integrity.
- (e) Explain role based access control.

WT

(3)

ND—06—2023

5. Write short notes on any *three* of the following :

15

- (a) Plain Text
- (b) Intruders
- (c) Availability
- (d) Data integrity
- (e) Categories of vulnerabilities.

ND—06—2023

3